# The Massachusetts HIV/AIDS Epidemic at a Glance – Detailed Data Tables and Technical Notes:

Table 1. People living with HIV/AIDS<sup>1</sup>, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year<sup>2</sup>: 1999–2005, Massachusetts

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection		
1999	12,248	398	1,325		
2000	13,038	374	1,164		
2001	13,618	423	1,003		
2002	14,305	377	1,064		
2003	14,847	391	933		
2004	15,460	330	943		
2005	15,966	300	806		

<sup>&</sup>lt;sup>1</sup>Number of People living with HIV/AIDS on 12/31 of each year

#### **Technical Notes:**

#### **Estimated Total Number of People Living with HIV/AIDS:**

The U.S. Centers for Disease Control and Prevention (CDC) estimates that about one-quarter of HIV infected persons nationwide do not know they are infected (previous editions of the Epidemiologic Profile estimated that about one-third of HIV-infected persons either did not know they were infected or were not in care). Applying the national estimate to the number of people living with HIV/AIDS in Massachusetts reported to the HIV/AIDS Surveillance Program (N = 15,966 as of December 31, 2005), and adjusting for completeness of reporting, would yield an estimated 6,261 people who are infected with HIV and do not know it, and 2,818 who know their status but have not been reported. Therefore, the estimated total number of people currently living with HIV/AIDS in Massachusetts, including people known to the surveillance system as well as those yet to be identified, is in the range of 24,000–26,000 people.

<sup>&</sup>lt;sup>2</sup> Reflects year of diagnosis for HIV infection among all individuals reported with HIV infection, with or without an AIDS diagnosis Data source: MDPH HIV/AIDS Surveillance Program, Data as of 7/1/06

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<sup>&</sup>lt;sup>1</sup> Fleming PL, Byers RH, Sweeney PA, Daniels D, Karon JM, Janssen RS. HIV prevalence in the United States, 2000. Abstract 11. 9<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, Seattle, Washington, February 24-28, 2002

by mortality status on December 31, 2005: Massachusetts								
<u> </u>	N	%						
People Living with HIV/AIDS	15,966	58%						
People Reported with HIV or AIDS who are Deceased	11,665	42%						
Total Number of People Reported with HIV Infection or AIDS	27,631	100%						

### Who is currently living with HIV/AIDS in Massachusetts?

Please note that previous editions of the Epidemiologic Profile presented people living with HIV/AIDS as of July 1<sup>st</sup> whereas this edition presents people living with HIV/AIDS as of December 31<sup>st</sup> for consistency with national standards.

Table 3. People living with HIV/AIDS on December 31, 2005 by
gender, race/ethnicity, place of birth and health service region:
Massachusetts

	People Living with HIV/AIDS on 12/31/05					
Gender:	N	%				
Male Female	11,368 4,598	71% 29%				
Race/Ethnicity:	N	%				
White (non-Hispanic) Black (non-Hispanic) Hispanic Asian/Pacific Islander American Indian/Alaska Native Other/Unknown	7,245 4,426 3,975 196 22 102	45% 28% 25% 1% <1%				
Place of Birth:	N	%				
US Puerto Rico/US Dependency <sup>1</sup> Non-US	11,054 1,940 2,972	69% 12% 19%				
Health Service Region(HSR) <sup>2</sup> :	N	%				
Boston HSR Central HSR Metro West HSR Northeast HSR Southeast HSR Western HSR Prison <sup>3</sup> TOTAL <sup>4</sup>	5,211 1,419 1,985 2,305 2,195 1,852 993 <b>15,966</b>	33% 9% 12% 14% 14% 12% 6% <b>100%</b>				

<sup>&</sup>lt;sup>1</sup> Ninety-four percent of people living with HIV/AIDS who were born in a US Dependency were born in Puerto Rico, <1% were born in the US Virgin Islands, and 6% were born in an unknown dependency.

were born in the US Virgin Islands, and 6% were born in an unknown dependency.

Reflects the health service region of a person's residence at the time of report (not necessarily current residence); See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

http://www.mass.gov/dph/aids/research/profile2005/app5 hrs maps.pdf for configuration of health service regions.

HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. The prisons category represents persons who were diagnosed with HIV/AIDS while in a correctional facility.

category represents persons who were diagnosed with HIV/AIDS while in a correctional facility.

<sup>4</sup> Total includes 8 people living with HIV/AIDS with unknown HSR; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

# Table 4. People living with HIV/AIDS by exposure mode: Massachusetts

People Living with HIV/AIDS on 12/31/05

	1 3	
Exposure Mode:	N	%
Male-to-male sex (MSM)	5,325	33%
Injection Drug Use (IDU)	4,264	27%
MSM/IDU	509	3%
Receipt of Blood/Blood products	124	1%
Pediatric	281	2%
Total Heterosexual Sex (HTSX)	2,147	13%
HTSX w/ an Injection Drug User	899	6%
HTSX w/ Bisexual male	35	<1%
<ul> <li>HTSX w/ a person w/ HIV or AIDS</li> </ul>	1,188	7%
Other HTSX <sup>1</sup>	25	<1%
Total Undetermined/Other	3,313	21%
<ul> <li>Presumed Heterosexual Sex<sup>2</sup></li> </ul>	2,406	15%
<ul> <li>Undetermined/Other<sup>3</sup></li> </ul>	910	6%
TOTAL	15,966	100%

<sup>1</sup> Includes heterosexual sex with a person who received blood/blood products

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Note: The category of "presumed heterosexual sex" is used in Massachusetts to reassign people who are reported with no identified risk but who are known to have not reported any other risks except heterosexual sex with a partner of unknown HIV status or risk. Massachusetts uses this category to distinguish these cases from other undetermined cases about which we know less. Nationally, the Centers for Disease Control and Prevention categorizes "presumed heterosexual sex" cases as "no identified risk" (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk is for people in this category. Although a person may not report other risk behaviors such as injection drug use or male-to-male sex to his/her health care provider, it does not necessarily mean that he/she has not engaged in them. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with a partner of unknown HIV status or risk

<sup>&</sup>lt;sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk, those lost to follow-up, and one person with confirmed occupational exposure

	Male		Female	
Race/Ethnicity:	N	%	N	%
White Non-Hispanic	5,893	52%	1,352	29%
Black Non-Hispanic	2,588	23%	1,838	40%
Hispanic	2,665	23%	1,310	28%
Asian/Pacific Islander	149	1%	47	1%
American Indian/Alaska Native	10	<1%	12	<1%
Not Specified	63	1%	39	1%
Total	11,368	100%	4,598	100%

### Who is experiencing differential impact from HIV/AIDS?

#### **Explanation of age adjusted rates**

A "rate" of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes rather than relying on the raw number of cases. For example, the number of people living with HIV/AIDS on December 31, 2005 who are Hispanic, is 3,975, whereas the number of people living with HIV/AIDS who are white (non-Hispanic) is 7,245. Although the *number* of people living with HIV/AIDS who are Hispanic in Massachusetts is smaller than the number of people living with HIV/AIDS who are white (non-Hispanic), we also need to consider that there are far fewer people of Hispanic heritage living in Massachusetts than white (non-Hispanic) individuals. Hispanic individuals represent 6% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 82% of the population. So, if HIV/AIDS had the same impact on the Hispanic population of the state as on the white (non-Hispanic), then there should be almost 12 times as many cases in white (non-Hispanic) individuals, but there are only about twice as many. By calculating a rate which takes into consideration the differences in the population size, it is evident that the number of people living with HIV/AIDS for every 100,000 Hispanic individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is called a "crude rate" and is calculated by dividing the number of people living with HIV/AIDS by the population of interest (the total number of Hispanic individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

## Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (136.0 per 100,000)

Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals

= (number of white (non-Hispanic) individuals living with HIV/AIDS ÷ population size of white (non-Hispanic) individuals)×100,000

 $= (7,245/5,326,585) \times 100,000$ =  $(0.0013601585) \times 100,000$ 

= 136.0

However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic populations are generally younger than white (non-Hispanic). The median age of black (non-Hispanic) people (29.7 years) and Hispanic people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, it is necessary to "ageadjust" the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (129.2 per 100,000)

А	В	С	D	E	
Age group (in years)	# of prevalent HIV/AIDS cases	Population (2000)	2000 US standard population weight	Age-adjusted rate ((B÷C×D)×100,000))	
<1	0	61,381	0.013818	0.00	
1-4	1	245,562	0.055317	0.02	
5-14	35	675,388	0.145565	0.75	
15-24	76	634,387	0.138646	1.66	
25-34	566	734,417	0.135573	10.45	
35-44	2815	902,498	0.162613	50.72	
45-54	2789	771,970	0.134834	48.71	
55-64	822	491,985	0.087247	14.58	
65-74	129	396,458	0.066037	2.15	
75-84	9	300,442	0.044842	0.13	
85+ years	3	112,097	0.015508	0.04	
Total	7,245	5,326,585		129.2	

To see the effect of age-distribution on prevalence rates see Table 6 below for a comparison of crude and age-adjusted rates by race/ethnicity.

Table 6. Crude and age-adjusted HIV/AIDS prevalence per
100,000 population on December 31, 2005 by race/ethnicity and
gender: Massachusetts

State Total:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic)	136.0	129.2
Black (non-Hispanic)	1,315.1	1,427.3
Hispanic	927.2	1,217.4
Asian/Pacific Islander	79.8	85.7
American Indian/Alaskan Native	191.5	179.8
Total prevalence	251.5	245.7
	Crude rate per	Age-adjusted rate
Males:	100,000	per 100,000
White (non-Hispanic) Males	230.3	215.3
Black (non-Hispanic) Males	1,595.6	1,816.0
Hispanic Males	1,258.9	1,756.9
Asian/Pacific Islander Males	123.5	134.9
American Indian/Alaskan Native Males	174.9	166.6
Total prevalence among males	371.6	360.0
Famalage	Crude rate per	Age-adjusted rate
Females:	100,000	per 100,000
White (non-Hispanic) Females	48.8	47.6
Black (non-Hispanic) Females	46.6 1,054.1	1,094.0
Hispanic Females	603.6	742.9
Asian/Pacific Islander Females	37.6	38.6
American Indian/Alaskan Native Females	207.8	193.1
Total prevalence among females	139.7	138.0

<sup>&</sup>lt;sup>1</sup> The denominators for prevalence calculations are based on year 2000 population estimates from the MDPH Bureau of Health Statistics, Research and Evaluation Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/06

### Who is most at risk of HIV infection and how has this changed over time?

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	Male		Female		
	N	%	N	%	Total
< 1999	15,734	77%	4,645	23%	20,379
1999	918	69%	407	31%	1,325
2000	808	69%	356	31%	1,164
2001	705	70%	298	30%	1,003
2002	719	68%	345	32%	1,064
2003	645	69%	288	31%	933
2004	656	70%	287	30%	943
2005 <sup>2</sup>	595	74%	211	26%	806

Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

Table 8. People diagnosed with HIV infection by race/ethnicity and vear of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	White NH		Black NH		Hispanic		API		AI/AN		Total <sup>2</sup>
	N	%	N	%	N	%	N	%	N	%	
< 1999	11,259	55%	4,774	23%	4,172	20%	101	<1%	26	<1%	20,379
1999	560	42%	395	30%	338	26%	20	2%	3	<1%	1,325
2000	454	39%	398	34%	279	24%	26	2%	2	<1%	1,164
2001	413	41%	323	32%	235	23%	26	3%	2	<1%	1,003
2002	412	39%	356	33%	258	24%	23	2%	2	<1%	1,064
2003	366	39%	304	33%	237	25%	13	1%	0	0%	933
2004	360	38%	301	32%	251	27%	14	1%	2	<1%	943
2005 <sup>3</sup>	322	40%	268	33%	192	24%	17	2%	1	<1%	806

Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

<sup>&</sup>lt;sup>2</sup> 2005 data are preliminary
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

<sup>&</sup>lt;sup>2</sup> Totals include people with unspecified race/ethnicity

<sup>&</sup>lt;sup>3</sup> 2005 data are preliminary

NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Table 9. *Mal*es diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	White NH		White NH Black NH Hispanic				AP	l	AI/AN		Total <sup>2</sup>	
	N	%	N	%	N	%	N	%	N	%		
< 1999	9,485	60%	3185	20%	2928	19%	85	1%	19	<1%	15,734	
1999	438	48%	234	25%	228	25%	12	1%	1	<1%	918	
2000	366	45%	223	28%	191	24%	24	3%	0	0%	808	
2001	338	48%	178	25%	164	23%	21	3%	1	<1%	705	
2002	336	47%	186	26%	171	24%	15	2%	2	<1%	719	
2003	315	49%	165	26%	150	23%	10	2%	0	0%	645	
2004	311	47%	165	25%	163	25%	9	1%	0	0%	656	
2005 <sup>3</sup>	288	48%	153	26%	135	23%	14	2%	1	<1%	595	

<sup>1</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Table 10. *Females* diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	White NH		Black NH		Hispanic		API		AI/AN		Total <sup>2</sup>
	N	%	N	%	N	%	N	%	N	%	
< 1999	1,774	38%	1,589	34%	1,244	27%	16	<1%	7	<1%	4,645
1999	122	30%	161	40%	110	27%	8	2%	2	<1%	407
2000	88	25%	175	49%	88	25%	2	1%	2	1%	356
2001	75	25%	145	49%	71	24%	5	2%	1	<1%	298
2002	76	22%	170	49%	87	25%	8	2%	0	0%	345
2003	51	18%	139	48%	87	30%	3	1%	0	0%	288
2004	49	17%	136	47%	88	31%	5	2%	2	1%	287
2005 <sup>3</sup>	34	16%	115	55%	57	27%	3	1%	0	0%	211

Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

<sup>&</sup>lt;sup>2</sup> Totals include people with unspecified race/ethnicity

<sup>&</sup>lt;sup>3</sup> 2005 data are preliminary

<sup>&</sup>lt;sup>2</sup> Totals include people with unspecified race/ethnicity

<sup>&</sup>lt;sup>3</sup> 2005 data are preliminary

Table 11. People diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	MS	М	ID	U	MS ID		нт	SX	Ot	her	Pre HTS			eter- ied <sup>3</sup>	Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	7,579	37%	7,168	35%	851	4%	2,034	10%	767	4%	1,338	7%	642	3%	20,379
1999	373	28%	391	30%	33	2%	198	15%	17	1%	250	19%	63	5%	1,325
2000	345	30%	248	21%	23	2%	191	16%	19	2%	265	23%	73	6%	1,164
2001	305	30%	207	21%	25	2%	157	16%	8	1%	221	22%	80	8%	1,003
2002	330	31%	182	17%	25	2%	168	16%	12	1%	254	24%	93	9%	1,064
2003	309	33%	144	15%	24	3%	108	12%	15	2%	214	23%	119	13%	933
2004	292	31%	149	16%	16	2%	106	11%	12	1%	219	23%	149	16%	943
2005⁴	315	39%	109	14%	18	2%	75	9%	2	<1%	179	22%	108	13%	806

 $<sup>^{1}</sup>$  Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

Table 12. *Males* diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	MS	М	ID	U	MS ID		нт	SX	Otl	ner	Pro HT			eter- ied³	Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	7,579	48%	5,025	32%	851	5%	565	4%	481	3%	728	5%	505	3%	15,734
1999	373	41%	270	29%	33	4%	68	7%	9	1%	119	13%	46	5%	918
2000	345	43%	168	21%	23	3%	66	8%	13	2%	134	17%	59	7%	808
2001	305	43%	149	21%	25	4%	63	9%	3	<1%	110	16%	50	7%	705
2002	330	46%	127	18%	25	3%	56	8%	7	1%	117	16%	57	8%	719
2003	309	48%	103	16%	24	4%	43	7%	11	2%	86	13%	69	11%	645
2004	292	45%	95	14%	16	2%	45	7%	6	1%	99	15%	103	16%	656
2005⁴	315	53%	84	14%	18	3%	21	4%	0	0%	85	14%	72	12%	595

Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with partners with unknown risk and HIV status

<sup>&</sup>lt;sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up

<sup>&</sup>lt;sup>4</sup> 2005 data are preliminary

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with partners with unknown risk and HIV status

Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up
 2005 data are preliminary

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Table 13. *Females* diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	IDI	J	HTS	SX	Othe	er	Pre HTS	_	Unde mine	_	Total
	N	%	N	%	N	%	N	%	N	%	N
<1999	2,143	46%	1,469	32%	286	6%	610	13%	137	3%	4,645
1999	121	30%	130	32%	8	2%	131	32%	17	4%	407
2000	80	22%	125	35%	6	2%	131	37%	14	4%	356
2001	58	19%	94	32%	5	2%	111	37%	30	10%	298
2002	55	16%	112	32%	5	1%	137	40%	36	10%	345
2003	41	14%	65	23%	4	1%	128	44%	50	17%	288
2004	54	19%	61	21%	6	2%	120	42%	46	16%	287
2005⁴	25	12%	54	26%	2	1%	94	45%	36	17%	211

<sup>&</sup>lt;sup>1</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

Table 14. People diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	US		Puerto R US Depend		Non-U		
	N	%	N	%	N	%	Total
< 1999	15,839	78%	2,460	12%	2,080	10%	20,379
1999	914	69%	168	13%	243	18%	1,325
2000	741	64%	129	11%	294	25%	1,164
2001	631	63%	111	11%	261	26%	1,003
2002	629	59%	108	10%	327	31%	1,064
2003	586	63%	90	10%	257	28%	933
2004	591	63%	102	11%	250	27%	943
2005 <sup>3</sup>	499	62%	66	8%	241	30%	806

<sup>&</sup>lt;sup>1</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with partners with unknown risk and HIV status

Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up
 2005 data are preliminary

IDU = Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

<sup>&</sup>lt;sup>2</sup> Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, and 2% were born in an unknown dependency

<sup>3 2005</sup> data are preliminary

Table 15. *Males* diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	US		Puerto R US Depend	•	Non-U		
	N	%	N	%	N	%	Total
< 1999	12,535	80%	1,752	11%	1,447	9%	15,734
1999	673	73%	117	13%	128	14%	918
2000	544	67%	94	12%	170	21%	808
2001	466	66%	77	11%	162	23%	705
2002	468	65%	70	10%	181	25%	719
2003	448	69%	52	8%	145	22%	645
2004	466	71%	61	9%	129	20%	656
2005 <sup>3</sup>	410	69%	50	8%	135	23%	595

<sup>&</sup>lt;sup>1</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

Table 16. *Females* diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts, before 1999, 1999–2005<sup>1</sup>

	US		Puerto R US Depend	Non-U			
	N	%	N	%	N	%	Total
< 1999	3,304	71%	708	15%	633	14%	4,645
1999	241	59%	51	13%	115	28%	407
2000	197	55%	35	10%	124	35%	356
2001	165	55%	34	11%	99	33%	298
2002	161	47%	38	11%	146	42%	345
2003	138	48%	38	13%	112	39%	288
2004	125	44%	41	14%	121	42%	287
2005 <sup>3</sup>	89	42%	16	8%	106	50%	211

Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

<sup>&</sup>lt;sup>2</sup> Ninety-five percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, and 4% were born in an unknown dependency

<sup>&</sup>lt;sup>3</sup> 2005 data are preliminary

<sup>&</sup>lt;sup>2</sup> Ninety-five percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, and 4% were born in an unknown dependency

<sup>&</sup>lt;sup>3</sup> 2005 data are preliminary

Table 17. People Diagnosed with HIV Infection by Race/Ethnicity<sup>1</sup> and Place of Birth: MA, 2003–2005<sup>2</sup>

	US		Puerto Rico/ US Dependency <sup>3</sup> Non-US						
Race/Ethnicity:	N	%	N	%	N	%	N		
White NH	965	92%	5	<1%	78	7%	1,048		
Black NH	432	49%	2	<1%	439	50%	873		
Hispanic	239	35%	251	37%	190	28%	680		
API	12	27%	0	0%	32	73%	44		

Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers

Table 18. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts, 2003–2005<sup>1</sup>

	Male		Femal	e	State Total	
Race/Ethnicity:	N	%	N	%	N	%
White NH	914	48%	134	17%	1,048	39%
Black NH	483	25%	390	50%	873	33%
Hispanic	448	24%	232	30%	680	25%
APİ	33	2%	11	1%	44	2%
AI/AN	1	<1%	2	<1%	3	<1%
Unknown	17	1%	17	2%	34	1%
Total	1,896	100%	786	100%	2,682	100%

<sup>&</sup>lt;sup>1</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaska Native; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 7/1/06

<sup>&</sup>lt;sup>2</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;

<sup>&</sup>lt;sup>3</sup> 97% percent of people diagnosed with HIV infection from 2003-2005 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and 3% were born in an unknown US dependency NH = Non-Hispanic, API = Asian/Pacific Islander

Table 19. People diagnosed with HIV infection by gender and
exposure mode: Massachusetts, 2003–2005 <sup>1</sup>

	Male		Femal	е	State To	tal
Exposure Mode:	N	%	N	%	N	%
MSM	916	48%	N/A	N/A	916	34%
IDU	282	15%	120	15%	402	15%
MSM/IDU	58	3%	N/A	N/A	58	2%
HTSX	109	6%	180	23%	289	11%
Other	17	1%	12	2%	29	1%
Total Undetermined	514	27%	474	60%	988	37%
- Pres. HTSX <sup>2</sup>	270	14%	342	44%	612	23%
- Undetermined <sup>3</sup>	244	13%	132	17%	376	14%
Total	1,896	100%	786	100%	2,682	100%

<sup>1</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

# Who is infected with HIV but does not yet know? (Concurrent Diagnoses)

Table 20. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by place of birth: Massachusetts, 2003–2005<sup>1</sup>

	HIV and AIDS Diagnosed within 2 Months	All HIV Infection Diagnoses	% Diagnosed with HIV and AIDS within 2 Months
Place of Birth:	N	N	%
US Puerto Rico/US Dependency <sup>2</sup> Non-US	416 67 269	1,676 258 748	25% 26% 36%
TOTAL	752	2,682	28%

<sup>&</sup>lt;sup>1</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with partners with unknown risk and HIV status

<sup>&</sup>lt;sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk, those lost to follow-up MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex; N/A = Not Applicable

<sup>&</sup>lt;sup>2</sup> 97% percent of people diagnosed with HIV infection from 2003-2005 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and 3% were born in an unknown US dependency

## How have patterns of AIDS diagnoses changed over time?

Table 21. Reported AIDS cases, by race/ethnicity and year of diagnosis: Massachusetts, 1985–2005<sup>1</sup>

	White	NH :	Black NH		Hispa	anic	AF	Pl	AI/A	Total <sup>2</sup>	
	N	%	N	%	N	%	N	%	N	%	N
4005	454	C00/	40	000/	04	00/	4	-40/	0	00/	005
1985	154	68%	49	22%	21	9%	1	<1%	0	0%	225
1990	664	62%	236	22%	171	16%	4	<1%	2	<1%	1,079
1995	748	53%	311	22%	327	23%	5	<1%	5	<1%	1,399
1996	577	50%	297	26%	274	24%	7	1%	4	<1%	1,160
1997	405	44%	276	30%	222	24%	12	1%	0	0%	916
1998	414	43%	303	31%	234	24%	13	1%	0	0%	965
1999	416	45%	243	26%	254	27%	12	1%	2	<1%	928
2000	292	38%	250	32%	217	28%	18	2%	1	<1%	778
2001	293	42%	222	32%	173	25%	9	1%	1	<1%	698
2002	251	38%	223	34%	171	26%	14	2%	2	<1%	661
2003	211	38%	187	34%	151	27%	8	1%	0	0%	557
2004	236	40%	178	30%	165	28%	4	1%	1	<1%	584
2005 <sup>1</sup>	195	39%	176	35%	124	25%	11	2%	0	0%	506

<sup>1</sup>2005 data are preliminary
<sup>2</sup> Total includes people of unspecified race/ethnicity
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Table 22. Reported AIDS cases by exposure mode and year of diagnosis: Massachusetts, 1985–2005<sup>1</sup>

	MS	SM				MSM/ J IDU HTSX			Oth	er	Pres. HTSX <sup>2</sup>		Undeter- mined <sup>3</sup>		To- tal
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
1985	141	63%	32	14%	12	5%	7	3%	13	6%	17	8%	3	1%	225
1990	478	44%	344	32%	45	4%	74	7%	58	5%	53	5%	27	3%	1,079
1995	436	31%	579	41%	63	5%	165	12%	35	3%	68	5%	53	4%	1,399
1996	352	30%	446	38%	35	3%	173	15%	33	3%	68	6%	53	5%	1,160
1997	243	27%	366	40%	35	4%	122	13%	21	2%	80	9%	49	5%	916
1998	253	26%	348	36%	31	3%	126	13%	17	2%	139	14%	51	5%	965
1999	232	25%	369	40%	27	3%	117	13%	5	1%	152	16%	26	3%	928
2000	174	22%	263	34%	16	2%	132	17%	10	1%	150	19%	33	4%	778
2001	166	24%	206	30%	27	4%	108	15%	14	2%	133	19%	44	6%	698
2002	164	25%	184	28%	22	3%	104	16%	6	1%	130	20%	51	8%	661
2003	128	23%	158	28%	14	3%	87	16%	10	2%	101	18%	59	11%	557
2004	146	25%	143	24%	17	3%	68	12%	8	1%	124	21%	78	13%	584
2005 <sup>1</sup>	143	28%	110	22%	16	3%	65	13%	3	1%	104	21%	65	13%	506

<sup>12005</sup> data are preliminary

## Who is dying with HIV/AIDS and how has this changed over time?

The death data presented in this analysis includes all deaths among people reported with HIV infection and those with AIDS in Massachusetts to present a full description of trends in mortality among this population. This includes a small number of deaths from non-HIV/AIDS related causes such as drug overdoses, suicides, motor vehicle accidents and other causes. Therefore, the total number of annual deaths reported here will vary from the number of HIV/AIDS-related deaths reported in *Massachusetts Deaths* by the Massachusetts Department of Public Health Center for Health Information, Statistics, Research and Evaluation.

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with partners with unknown risk and HIV status

<sup>&</sup>lt;sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Table 23. Deaths among persons reported with HIV infection (non-
AIDS) and AIDS by year of death: Massachusetts, 1985–2005 <sup>2</sup>

	HIV	AIDS	Total HIV + AIDS
Year of death	N	N	
	4		
1985	<sup>1</sup>	119	
1990	<sup>1</sup>	632	<sup>1</sup>
1995	1	1,184	1
1996	1	795	1
1997	1	386	1
1998	<sup>1</sup>	332	1
1999	49	349	398
2000	39	335	374
2001	54	369	423
2002	60	317	377
2003	64	327	391
2004	58	272	330
2005 <sup>2</sup>	53	247	300
2000	55	271	

<sup>&</sup>lt;sup>1</sup>HIV Reporting was implemented in 1999; therefore there are no data for deaths among people with HIV who did not progress to AIDS during this time period.
<sup>2</sup> 2005 data are preliminary
Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Table 24. Deaths among persons reported with HIV/AIDS by gender
and year of death: Massachusetts, 1999–2005 <sup>1</sup>

	Male		Female		Total
Year of death	N	%	N	%	N
1999	304	76%	94	24%	398
2000	271	72%	103	28%	374
2001	303	72%	120	28%	423
2002	271	72%	106	28%	377
2003	262	67%	129	33%	391
2004	246	75%	84	25%	330
2005 <sup>1</sup>	206	69%	94	31%	300

<sup>1</sup> 2005 data are preliminary
Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Table 25. Dea	iths among persons reported with HIV/AID	S by
race/ethnicity	y and year of death: Massachusetts, 1999-	-2005 <sup>1</sup>

N	%	N	0/							
		- 11	%	N	%	N	%	N	%	$N^2$
189	47%	98	25%	106	27%	2	1%	3	1%	398
189	51%	88	24%	94	25%	2	1%	1	<1%	374
229	54%	116	27%	77	18%	0	0%	1	<1%	423
176	47%	113	30%	84	22%	3	1%	0	0%	377
189	48%	110	28%	88	23%	2	1%	1	<1%	391
166	50%	74	22%	81	25%	5	2%	0	0%	330
143	48%	80	27%	74	25%	2	1%	0	0%	300
1	89 29 76 89 66	89 47% 89 51% 29 54% 76 47% 89 48% 66 50%	89 47% 98 89 51% 88 29 54% 116 76 47% 113 89 48% 110 66 50% 74	89 47% 98 25% 89 51% 88 24% 29 54% 116 27% 76 47% 113 30% 89 48% 110 28% 66 50% 74 22%	89 47% 98 25% 106 89 51% 88 24% 94 29 54% 116 27% 77 76 47% 113 30% 84 89 48% 110 28% 88 66 50% 74 22% 81	89 47% 98 25% 106 27% 89 51% 88 24% 94 25% 29 54% 116 27% 77 18% 76 47% 113 30% 84 22% 89 48% 110 28% 88 23% 66 50% 74 22% 81 25%	89       47%       98       25%       106       27%       2         89       51%       88       24%       94       25%       2         29       54%       116       27%       77       18%       0         76       47%       113       30%       84       22%       3         89       48%       110       28%       88       23%       2         66       50%       74       22%       81       25%       5	89       47%       98       25%       106       27%       2       1%         89       51%       88       24%       94       25%       2       1%         29       54%       116       27%       77       18%       0       0%         76       47%       113       30%       84       22%       3       1%         89       48%       110       28%       88       23%       2       1%         66       50%       74       22%       81       25%       5       2%	89       47%       98       25%       106       27%       2       1%       3         89       51%       88       24%       94       25%       2       1%       1         29       54%       116       27%       77       18%       0       0%       1         76       47%       113       30%       84       22%       3       1%       0         89       48%       110       28%       88       23%       2       1%       1         66       50%       74       22%       81       25%       5       2%       0	89       47%       98       25%       106       27%       2       1%       3       1%         89       51%       88       24%       94       25%       2       1%       1       <1%

<sup>2005</sup> data are preliminary

<sup>2</sup> Totals includes people of unknown race/ethnicity
NH=Non-Hispanic, API=Asian/Pacific Islander, AI/AN=American Indian/Alaska Native

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

### Table 26. Deaths among males reported with HIV/AIDS by race/ethnicity and year of death: Massachusetts, 1999–2005<sup>1</sup>

	White NH		Black NH		Hispanic		API		AI/AN		Total	
Year of Death	N	%	N	%	N	%	N	%	N	%	$N^2$	
1999	152	50%	73	24%	75	25%	2	1%	2	1%	304	
2000	149	55%	54	20%	65	24%	2	1%	1	<1%	271	
2001	168	55%	77	25%	57	19%	0	0%	1	<1%	303	
2002	137	51%	73	27%	57	21%	3	1%	0	0%	271	
2003	126	48%	66	25%	66	25%	2	1%	1	<1%	262	
2004	133	54%	52	21%	54	22%	5	2%	0	0%	246	
2005 <sup>1</sup>	102	50%	48	23%	54	26%	2	1%	0	0%	206	

NH=Non-Hispanic, API=Asian/Pacific Islander, Al/AN=American Indian/Alaska Native

<sup>&</sup>lt;sup>1</sup> 2005 data are preliminary <sup>2</sup> Totals includes people of unknown race/ethnicity

Table 27. Deaths among females reported with HIV/AIDS by
race/ethnicity and year of death: Massachusetts, 1999–2005 <sup>1</sup>

	White NH		Black NH		Hispanic		API		AI/A	Total	
Year of Death	N	%	N	%	N	%	N	%	N	%	N <sup>2</sup>
1999	37	39%	25	27%	31	33%	0	0%	1	1%	94
2000	40	39%	34	33%	29	28%	0	0%	0	0%	103
2001	61	51%	39	33%	20	17%	0	0%	0	0%	120
2002	39	37%	40	38%	27	25%	0	0%	0	0%	106
2003	63	49%	44	34%	22	17%	0	0%	0	0%	129
2004	33	39%	22	26%	27	32%	0	0%	0	0%	84
2005 <sup>1</sup>	41	44%	32	34%	20	21%	0	0%	0	0%	94

<sup>1 2005</sup> data are preliminary

NH=Non-Hispanic, API=Asian/Pacific Islander, Al/AN=American Indian/Alaska Native

Table 28. Deaths among persons reported with HIV/AIDS by exposure mode and year of death: Massachusetts, 1999–2005<sup>1</sup>

	MSM		MSM IDU			MSM/ IDU HTSX			Other		Pres. HTSX <sup>2</sup>		Undeter- mined <sup>3</sup>		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	
1999	72	18%	214	54%	18	5%	33	8%	14	4%	30	8%	17	4%	398	
2000	76	20%	203	54%	16	4%	25	7%	13	3%	27	7%	14	4%	374	
2001	91	22%	218	52%	20	5%	29	7%	7	2%	29	7%	29	7%	423	
2002	77	20%	202	54%	17	5%	36	10%	9	2%	24	6%	12	3%	377	
2003	73	19%	197	50%	17	4%	46	12%	8	2%	28	7%	22	6%	391	
2004	61	18%	167	51%	19	6%	26	8%	8	2%	26	8%	23	7%	330	
2005 <sup>1</sup>	44	15%	163	54%	13	4%	32	11%	3	1%	25	8%	20	7%	300	

<sup>2005</sup> data are preliminary

<sup>&</sup>lt;sup>2</sup> Totals includes people of unknown race/ethnicity

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with partners with unknown risk and HIV status

<sup>&</sup>lt;sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/06

Table 29. Deaths among *males* reported with HIV/AIDS by exposure mode and year of death: Massachusetts, 1999–2005<sup>1</sup>

	MSM					MSM/ IDU HTSX		Other		Pres. HTSX <sup>2</sup>		Undeter- mined <sup>3</sup>		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
1999	72	24%	160	53%	18	6%	10	3%	11	4%	17	6%	16	5%	304
2000	76	28%	135	50%	16	6%	4	1%	10	4%	16	6%	14	5%	271
2001	91	30%	137	45%	20	7%	12	4%	2	1%	15	5%	26	9%	303
2002	77	28%	134	49%	17	6%	10	4%	6	2%	16	6%	11	4%	271
2003	73	28%	124	47%	17	6%	17	6%	4	2%	19	7%	8	3%	262
2004	61	25%	114	46%	19	8%	13	5%	7	3%	14	6%	18	7%	246
2005 <sup>1</sup>	44	21%	110	53%	13	6%	11	5%	2	1%	12	6%	14	7%	206

<sup>1 2005</sup> data are preliminary

Table 30. Deaths among *females* reported with HIV/AIDS by exposure mode and year of death: Massachusetts, 1999–2005<sup>1</sup>

	IDI	U	нтѕх		Other		Pres. HTSX <sup>2</sup>		Undeter- mined <sup>3</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N
1999	54	57%	23	24%	3	3%	13	14%	1	1%	94
2000	68	66%	21	20%	3	3%	11	11%	0	0%	103
2001	81	68%	17	14%	5	4%	14	12%	3	3%	120
2002	68	64%	26	25%	3	3%	8	8%	1	1%	106
2003	73	57%	29	22%	4	3%	9	7%	14	11%	129
2004	53	63%	13	15%	1	1%	12	14%	5	6%	84
2005 <sup>1</sup>	53	56%	21	22%	1	1%	13	14%	6	6%	94

<sup>2005</sup> data are preliminary

<sup>&</sup>lt;sup>2</sup> Heterosexual sex with partners with unknown risk and HIV status

<sup>&</sup>lt;sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Heterosexual sex with partners with unknown risk and HIV status

<sup>&</sup>lt;sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up IDU = Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex